Our Impact

**Food Safety**
Leveraging our network of world-class experts to train growers on best practices in applying better, safer pest control tools.

**Environmental Sustainability**
Helping farmers transition from older crop protection tools to newer, safer technologies.

**Economic Growth**
Breaking down barriers and facilitating international cooperation to increase the trade of nutritious crops.

**Staff**
- Anna Gore
  Director of Operations
- Joe DeFrancesco, PhD
  Technical Consultant
- Verónica Picado
  Technical Consultant
- Adriana Castañeda, PhD
  Technical Consultant
- Nick Drost
  Business Manager

**Board of Directors**
- Dirk C. Drost, PhD
  Chairman
  Managing Partner
  D3 Consulting, LLC
- Daniel L. Kunkel, PhD
  Treasurer
  Product Development Director – NE Region
  AMVAC Chemical Corporation
- Alan Norden
  Secretary
  Australia

- Michael P. Braverman, PhD
  Biopesticide and Organic Support
  Program Manager and International Capacity Building
  IR-4 Project Headquarters
- Jason F. Sandahl, PhD
  CEO
  Ag Aligned Global, LLC

---

Learn more at minorusefoundation.org

Minor Use Foundation, Inc.  +1-336-209-5398  info@minorusefoundation.org
We make connections...

For the benefit of growers around the world.

850+

Individuals trained on the safe use of pesticides

Partnerships with 50+ grower groups and 12 research institutions across 18 countries
Dear Friends,

We are living in unprecedented times. From 2020 to January 2022, food prices increased nearly 40% due to supply chain challenges. This caused massive increases in food insecurity in the world’s most vulnerable regions. Global hunger and malnutrition have once again come into focus as a major target of international development as the needs have dramatically increased.

The Minor Use Foundation has responded by leveraging its network and resources to focus on solving concrete agricultural challenges in the places that need it most. We formed a new and exciting partnership with the United Nations’ Food and Agriculture Organization to better leverage international organizations for the benefit of minor use growers. We trained hundreds of growers, lab technicians, and regulators on safe pesticide application practices. We initiated a range of new research projects and submitted data packages to the Joint Meeting on Pesticide Residues (JMPR) for the establishment of international standards for minor use commodities.

The Foundation’s vision is to provide growers of fruits, vegetables, nuts, herbs, and spices around the globe with the latest plant protection technology and break down agricultural trade barriers.

Minor crops are essential to nutrition security, sustainable agriculture, and biodiversity. They are often high-value crops that have cultural importance, or are important for trade and economic growth in developing countries. They are also often overlooked in private investments in agriculture since they represent less of a percentage of total tonnage and acreage. The Minor Use Foundation serves minor use growers around the world, providing technical assistance and helping set standards that allow them to access international markets.

As you will read in the following pages of our Annual Report, 2021 was a year of establishing strong research foundations, key capacity-building milestones, and a transformation of our priority-setting process to enhance opportunities for regional engagement.

As we reflect on last year and look to the future, we continue to strengthen our collaborative framework and form lasting partnerships that will help create solutions for specialty crops and our global food supply.

I look forward to continuing our relationships for many productive years ahead.

Sincerely,

Dirk Drost
Board Chairman
Minor Use Foundation
# Table of Contents

**Welcome! Chair’s Letter**  
2

**Table of Contents**  
3

**2021 Accomplishments**  
4

- **Codex MRL Data Generation**  
  4

  - **2021/22 Crop Protection Priorities**  
    5

- **Archives Project**  
  5

**Training & Capacity Building**  
7

- **Training Programs in Latin America**  
  7

**Priority Setting Workshops**  
8

- **Asian Regional Priority Setting Workshop**  
  8

- **LAC Regional Priority Setting Workshop**  
  9

- **Africa Regional Priority Setting Workshop**  
  9

**Other Projects**  
10

- **Advanced Concepts of Manual 224 FAO Training Workshop**  
  10

- **JMPR Rejection Rate Analysis**  
  10

- **Building the Foundation – Personnel Updates**  
  11

**Financial Summary**  
12

**Appendix 1- Projects in Progress**  
13
2021 Accomplishments

Codex MRL Data Generation

At the heart of the Foundation’s vision to secure new plant protection products for growers of specialty crops is our residue program area focusing on Codex MRL data generation. This is where our partnerships and alliances shine, because a country-by-country approach to data generation creates problems for international trade. By working in collaboration with partners across numerous countries we are able to achieve a wider distribution of data, which ensures that Codex MRLs are more relevant to all farmers across the world and provides regulators with more robust data. Generating data in several countries, at the same time, together, helps farmers gain new products quickly. Additionally, data generated under cooperative work may be available and used both for national registrations and Codex MRL setting needs.

“As a company closely associated with specialty crops and MRLs, Bryant Christie Inc values its partnership with the Minor Use Foundation (MUF). The MUF gives voice to specialty crop growers around the world and helps connect them with the crop protection tools that they need to successfully produce their crop. They do this in a way that also facilitates global trade.”

— Matt Lantz, Vice President, Global Access, Bryant Christie Inc.
2021/22 Crop Protection Priorities – Funded Priorities and Progress

In 2021, the Foundation’s residue program progressed on the top ten priorities identified during the Global Minor Use Priority setting Workshop in September 2020.

Four of the 12 top priorities were funded and research initiated:

- Fluoxapiprolin on hops to control downy mildew,
- Indoxacarb on coffee to control coffee berry borer,
- Picoxystrobin on mango to control anthracnose, and
- Sulfoxaflor on passion fruit to control leafhopper, mealy bug and scale insects.

The year 2021 started with eight Foundation-funded projects in progress with 14 trials underway in Asia and 22 in Latin America. Throughout the year, those numbers grew to 13 funded projects with four active projects in Asia, seven in Latin America and two in Africa, and an additional five projects are in the planning stage. (See Annex 1 for a full list.)

Archives Project

The Foundation, with the full support and cooperation of the IR-4 Project, evaluated the IR-4 research archives with the aim of leveraging studies conducted over the years for the establishment of international standards (i.e., Codex MRLs). The Foundation was able to re-package and submit data to the manufacturers for eventual submission to the Joint Meeting on Pesticide Residues (JMPR) for four Codex MRLs, and will work with IR-4 and partner countries to complete another 30 data packages by 2024. A full list of the commodities included in the project is outlined on the next page. This important project would not be possible without the generous support of the United States Department of Agriculture (USDA) and North Carolina State University.

In the future, the Foundation will coordinate closely with the IR-4 Project to identify additional candidates to submit to JMPR. By leveraging existing work, we have the opportunity to increase the availability of improved crop protection tools to farmers to ensure a safe food supply and keep the lines of international trade open.
Training & Capacity Building

We are pleased to report the Foundation’s training and capacity building programs are proving successful. Instructors who graduated from our first round of training programs conducted their own training sessions in 2021. It is proof of the Foundation’s vision to build a network of professionals increasing the capacity to efficiently and effectively carry out residue trials to expand the tools farmers can use in protecting their crops.

Training Programs in Latin America

**Ecuador Pineapple/Spinetoram Residue Trial**

Edwin Barbosa, a chemist working with Agrosavia Colombia, directed three projects with IR-4 and works with the Foundation in our training program. Edwin worked virtually and in-person with the team in Ecuador and trained participants in Good Laboratory Practices (GLP) basics including calibrations and documentation. He also accompanied the research team in the first application. His work with the second generation of trainees supported by the Foundation demonstrates the positive domino effect of our programs.

**IICA GLP Training**

During summer 2021, the Foundation in coordination with the Inter-American Institute for Agricultural Cooperation (IICA) conducted virtual training in GLP. More than 20 people representing four countries (Costa Rica, Colombia, Peru, and Ecuador) participated. Graduates of previous Foundation training taught master classes with a special focus on mathematical calculations in the establishment of MRLs. This legacy of educators helps us ensure the next generation of researchers is well established to support the development of Codex MRLs.

We learned from the IICA GLP training that there is a clear need for additional access to GLP training. Working with IICA again, we developed a training event for Latin America, Caribbean and Africa regions in June 2022.
Priority Setting Workshops

The Foundation strives to deliver on stakeholder-driven needs. We constantly work toward improving our process to deliver MRLs based on the needs of the ag community around the globe. Working collaboratively allows us a high level of confidence that the projects we fund actually go toward expanding specialty crop producers’ portfolio of available pest management tools. We want to give farmers the ability to address pest or disease outbreaks with better tools while keeping the lines of international trade open.

Asian Regional Priority Setting Workshop

Following on the 2020 Global Minor Use Priority Setting Workshop, the Foundation engaged in discussions with the U.S. Department of Agriculture's Foreign Agriculture Service (FAS) to coordinate a regional workshop for Asia.

The Minor Use Foundation hosted the 2021 Asian Regional Priority Setting Workshop on December 2, 2021, in cooperation with FAS, the Food and Agriculture Organization (FAO), and IR-4 Project. More than 70 representatives from ten Asian countries participated and identified eight fruit and nut priorities and ten vegetable and herb priorities.

For the first time, Durian was identified as a priority, which speaks to the importance of increased engagement in the Asian region. Durian is a very high value crop and in need of CODEX MRLs to support the free flow of trade within Asia and beyond.

This was our first regional workshop and the successful outcome was pivotal to the way we approach priority setting. Our Board felt regional workshops would increase engagement in the priority setting process and improve the effectiveness of the work that follows, including residue trials and MRL harmonization. With this in mind, we started to plan for regional workshops in the Latin America and Africa regions in 2022.

The Asian Regional Workshop was also a first for utilizing a new system to streamline the collection of feedback from stakeholders in the priority setting process. We transitioned from collecting input on thousands of potential crop and plant protection technology combinations via emails and spreadsheets to an online system that allows participants complete transparency in the process as well as greater efficiencies and accuracy.
LAC Regional Priority Setting Workshop

The Foundation, in partnership with IICA and IR-4 Project, hosted the first Latin America and the Caribbean (LAC) Regional Priority Setting Workshop on September 26-27, 2022.

Africa Regional Priority Setting Workshop

On November 2, 2022, the Foundation hosted the first Africa Regional Priority Setting Workshop.

As we look to host the next Global Minor Use Summit and Priority Setting Meeting in late 2023 or early 2024, the input from these regional workshops will enhance and inform our collaborative process to identify MRL needs of stakeholders and farmers. Watch for a notice on the dates and location for this in-person meeting!
Other Projects

Advanced Concepts of Manual 224 FAO Training Workshop

In collaboration with FAO and the USDA, the Foundation hosted the Advanced Concepts of Manual 224 FAO Training Workshop on November 15-19, 2021. Building on previous JMPR training workshops on residue evaluation and dietary risk assessment (November 2019 – Chile) and residue evaluation and estimation of MRLs (November 2017 – Canada), this workshop focused on risk analysis, supervised trials, and estimation of MRLs.

Attendees of the virtual event included government officials, regulators, academia, consultants, researchers, and growers from 21 Latin American and Caribbean countries. The workshop was taught by Dr. Eloisa Caldas, professor at the University of Brasilia and a member of the FAO Expert Panel on Pesticide Residues.

Video and presentations from the Training Workshop have proven valuable additions to the Foundation’s growing library of training materials.

JMPR Rejection Rate Analysis

In December 2021, the Foundation submitted a report to JMPR. We analyzed the JMPR decisions on crop pesticide uses over a span of 10 years from 2010 to 2019 and identified the primary reasons for the JMPR rejecting the applications. Encouragingly, the analysis showed JMPR decisions were favorable for more than 70% of applications consistently since 2011.

The top leading reasons accounting for more than 80% of rejections include residue data not matching the submitted good agricultural practice (GAP) from a registered label (or no GAP) and an insufficient number of independent field trials.

The analysis aims to better understand why crop pesticide residue data gets rejected by JMPR so it can be used as a tool for the crop protection industry to improve data quality in order to fulfil the JMPR requirements and ultimately lead to development of Codex MRLs to facilitate harmonized trade.

The report will be published by FAO and included in the library of JMPR documentation.
Building the Foundation – Personnel Updates

The Foundation works with several talented individuals to help carry out our series of programs in residue work, training and education. We were pleased to add two new personnel in 2021.

- Ms. Adriana Castenada joined the foundation as a technical consultant for Latin America in 2020.
- Dr. Joe DeFrancesco joined the foundation as a technical consultant for our global program in 2020.
- Mr. Kenneth Samoil joined the Foundation in 2021 as a consultant to serve as study director, conduct the work to identify and provide options for reformat analysis of IR-4 packages, and support reregistration projects. Ken served in this role for 13 months and recently announced that he is leaving the foundation. We appreciate Ken's leadership and contributions.
- Ms. Veronica Picado joined the Foundation as a technical consultant in Latin America in 2021.
- Dr. Grace Lennon joined the Foundation as Study Director in November 2022 to continue the work started by Ken Samoil.

The Foundation began actively recruiting for a seasoned professional to help the organization grow in October 2021. This May, we were pleased to announce that Anna Gore joined the Foundation as our Director of Operations in May 2022.

Anna’s deep understanding of international MRL harmonization and her passion for leveraging agricultural technologies to improve food security will help the Foundation deepen and expand our work bringing critical tools to specialty crop growers.

The Foundation held several “Getting to Know You” calls with stakeholders to introduce Anna and share a glimpse of the future of the organization.
Financial Summary

The Minor Use Foundation is a 501(c)(3) nonprofit organization. The organization is funded by government grants, corporate donations, and in-kind donations of technical consultancy, test substances, and test materials. The expenses of the organization include technical and supervisory staff, administrative costs (communications, webservices, business management), and project related.

The intent of the Board of Directors is to invest a large proportion of the donations in work aimed to reduce trade barriers, provide new technology tools to growers, facilitate the training and capacity building program, and establish and maintain regional priority setting process which informs and facilitates a global process.

In 2021 we began to grow significantly in project and program implementation. We are investing 80% of the grant money we received in projects and programs described earlier in this report. In coordination with program growth, we are growing staff. In 2021 we added a Director of Operations, technical consultants and established partnerships with complementary organizations to allow us to implement our programs in Asia, Latin America, and Africa. Staff growth will be adjusted as needed in future to maintain sufficient staff to deliver the projects and programs and ensure continued appropriate management of the Foundation. We will continue to leverage our investments with local partners to support growers by creating synergies with crop pest management technology providers, regulators/government groups, and growers.
## Appendix 1

### Projects in Progress

<table>
<thead>
<tr>
<th>Target Crop</th>
<th>Solution</th>
<th>Target Pest</th>
<th>Partner Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Papaya</td>
<td>Trifloxystrobin + Fluopyram</td>
<td>Black rot &amp; Anthracnose</td>
<td>Costa Rica, Peru, Malaysia, Thailand</td>
</tr>
<tr>
<td>Dragon Fruit (Pitaya)</td>
<td>Trifloxystrobin + Fluopyram</td>
<td>White/brown spot (Neoscytalidium dimidiatum)</td>
<td>Vietnam</td>
</tr>
<tr>
<td>Banana</td>
<td>Spinetoram</td>
<td>Fruit fly</td>
<td>Colombia, Panama</td>
</tr>
<tr>
<td>Pineapple</td>
<td>Spinetoram</td>
<td>Fruit fly Thrips</td>
<td>Bolivia, Colombia, Ecuador, Panama</td>
</tr>
<tr>
<td>Dragon Fruit (Pitaya)</td>
<td>Spinetoram</td>
<td>Fruit fly</td>
<td>Ecuador</td>
</tr>
<tr>
<td>Coffee</td>
<td>Indoxacarb</td>
<td>Coffee Borer Beetle</td>
<td>Costa Rica, Uganda</td>
</tr>
<tr>
<td>Banana</td>
<td>Pyriproxyfen</td>
<td>Fruit fly/ insects</td>
<td>Colombia, Guatemala</td>
</tr>
<tr>
<td>Passion Fruit</td>
<td>Sulfoxaflor</td>
<td>Scale/Mealy bug</td>
<td>Colombia, Kenya, Peru, Uganda</td>
</tr>
<tr>
<td>Mango</td>
<td>Pixocystrobin</td>
<td>Antrhacnose (Colletotricum)</td>
<td>Argentina</td>
</tr>
<tr>
<td>Basil</td>
<td>Picarbutrazox</td>
<td>downy mildew</td>
<td>Thailand</td>
</tr>
<tr>
<td>Pineapple</td>
<td>Ethaboxam</td>
<td>Phytophthora</td>
<td>Costa Rica, Ecuador</td>
</tr>
<tr>
<td>Avocado</td>
<td>Ethaboxam</td>
<td></td>
<td>Colombia, Costa Rica, Panama, Peru</td>
</tr>
<tr>
<td>Cacao Bean</td>
<td>Oxythiapriprolin</td>
<td>Black Pod Disease</td>
<td>Colombia</td>
</tr>
<tr>
<td>Lettuce, leaf</td>
<td>Clethodim</td>
<td>weeds</td>
<td>Thailand</td>
</tr>
</tbody>
</table>

### Archives Project

- Caneberry | Flonicamid
- Cantaloupe | Flonicamid
- Cucumber (GH) | Flutianil
- Pomegranate | Flonicamid
- Sunflower | Flonicamid